

We claim:

1. A nozzle for use in a vehicle wash system comprising:

a nozzle body having a hollow interior with a peripheral wall;

a connector attached to the nozzle body for fluidly coupling to a source of fluid under pressure;

one or more fluid passageways extending from the connector into the hollow interior, the one or more fluid passageways forming an acute angle with said peripheral wall so as to induce a fluid vortex within said nozzle body, some of said passageways forming a different acute angle than others; and

a nozzle member including a nozzle orifice through which fluids are emitted from said nozzle, the nozzle member being substantially contained within the hollow interior for rotation substantially in unison with the fluid vortex during operation.

2. A nozzle for use in a vehicle wash system comprising:

a nozzle body having a hollow interior with a peripheral wall of circular transverse cross-section;

a connector attached to the nozzle body for fluidly coupling to a source of fluid under pressure;

one or more fluid passageways extending from the connector into the hollow interior, the one or more fluid passageways being configured to induce a fluid vortex within said nozzle body; and

a nozzle member including a nozzle orifice through which fluids are emitted from said nozzle, the nozzle member being substantially contained within the hollow interior for rotation substantially in unison with the fluid vortex during operation, said nozzle member being non-circular in transverse cross-section.

3. The nozzle of claim 2 wherein said nozzle member is polygonal in transverse cross-section.
4. A method of increasing the impact force of fluids impacting the surface of a vehicle after having been emitted from a nozzle used in a car wash system for emitting fluids onto a vehicle, said nozzle having a nozzle body with a hollow interior, a connector attached to the nozzle body for fluidly coupling to a source of fluid under pressure, one or more passageways extending from the connector into the hollow interior, the one or more passageways being configured to induce a fluid vortex within said nozzle body with a rotational velocity of a predetermined speed and a nozzle member including a nozzle orifice through which fluids are emitted from the nozzle, the nozzle member being substantially contained within said hollow interior for rotation substantially in unison with the fluid vortex during operation, comprising the step of reducing the rotational speed of said nozzle.
5. The method of claim 4 wherein said rotational velocity of said nozzle is reduced by increasing the number of said passageways.
6. The method of claim 4 wherein said rotational velocity of said nozzles is reduced by increasing the cross-sectional size of said passageways.
7. The method of claim 4 wherein said rotational velocity is reduced by increasing the angle of said passageways relative to a surface surrounding said hollow interior.
8. The method of claim 4 wherein there are a plurality of said passageways at least one of which forms a different angle with said surface surrounding said hollow interior than others of said passageways.
9. The method of claim 4 wherein said rotational velocity is reduced by providing the transverse cross-sectional configuration of the hollow interior of a different geometric configuration than at least a portion of the transverse cross-sectional configuration of the external surface of said nozzle member.

10. The method of claim 9 wherein said cross-sectional configuration of said hollow interior is provided to be circular and said transverse cross-sectional configuration of said at least a portion of the external surface of said nozzle member is provided to be polygonal.

11. The method of claim 10 wherein said transverse cross-sectional configuration of said at least a portion of the external surface of said nozzle member is provided to be hexagonal.